SECRET

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C.

5.13.86 req
7.3.86 apl.

PMD NO: R-S 4047(24)/12431F

DATE: 18 OCT 1983

HQ USAF PROGRAM OFFICER: LtCol Phillip J. Baker/RDSD/AV 224-8440
HQ USAF OPR: Lt Col Clifford C. Collins/XOSO/AV 227-3710

PROGRAM MANAGEMENT DIRECTIVE

FOR

DEFENSE SUPPORT PROGRAM (DSP) (U)

For:	Implementing Command:	AFSC
	Supporting Commands:	AFLC Space Command (for the Simplified Processing Station)
	Participating Commands:	ADCOM, AFLC, SAC, MAC, ATC, AFCC, AFTAC, TAC, AFOTEC, ESC, SIO, AFCSC, FTD
	Operating Commands:	Space Command, ADCOM (Operational Control)
	OT&E Command/Agency:	AFOTEC (MGTs, Satellite 14-17), Space Command (Other Efforts)
	Maintenance Command:	AFCC

1. [redacted]

2. (U) PROGRAM SUMMARY

a. (U) References: While each of the reference titles is normally unclassified, some of the titles or the list taken together reveal the mission of DSP. Certain sub-paragraphs are therefore classified SECRET.

(1) (U) Required Documents

Classified By: DSP SCG Jun 82
Declassify on: OADR

Released to requester
Released

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(a) (U) Update Sheet for the Defense Support Program Development Concept Paper No. 58, 1 September 1972.

(b) (U) Computer Resources Integrated Support Plan (CRISP) for the Defense Support Program, 31 July 1981.

(c) (U) DSP Launch Operations Plan, latest version.

(d) (U) DoD Shuttle Transition Plan, latest revision.

(e) (U) DSP Tactical Control Doctrine (ADCOMR 55-55), Volume I 1 April 1983; Volume II 15 January 1983.

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(h) (U) PMD R-S 1021( )/63735F/33605F, Implementation of the Air Force Portion of the Jam-Resistant Secure Communications (JRSC), latest version.

(i) (U) ADCOM ROCs 6-73, 3-77, 4-77, WWMCCS OR/ROC DSP-01-72, and 13-77, and Joint ADCOM/SAC GOR 205-78.

(j) (U) System Operational Concept for Mobile Ground Terminals (MGT) Defense Support Program, August 1981.

(2) (U) Related Documents

(a) (U) JCS Publication 19.

(b)

(c) (U) PMD X-07 105( )/PE 12436F, Command Center Processing and Display System (CCPDS), latest version.

(d) (U) SEEK OPTIONS PMD, November 1978.

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(h) (U) PMD R-S 2138( )/PE 35119F, Space Boosters Engineering Development, latest version.

(i) (U) PMD R-S 5068( )/PE 64411F/63411F/12449F, DoD Space Transportation System (STS) Acquisition Activities, latest version.

(j) (U) PMD R-S 5014( )/PE 63735F, Air Force Systems Engineering and Planning Support to the Worldwide Military Command and Control System, latest version.

(k) (U) PMD R-S 1059( )/PE 63425F/12430F, Defense Support Program Follow-on, latest version.

b. (U) Priorities

(1) (U) USAF Precedence Rating: 2-4 (FAD II).

(2) (U) DOD Master Urgency Listing: CUE-CAP 16.

c. (U) Force Structure

[redacted]

e. (U) Intelligence/Threat Estimate

(U) The Defense Intelligence Agency (DIA) validated Threat Assessment Report (TAR), Defense Support Program (DSP), Dec 79, and Space Threat Environment Description, SD-1400F-02-80, with four changes (validated by USAF/IN), will be the basis for the threat assessment in support of this PMD.

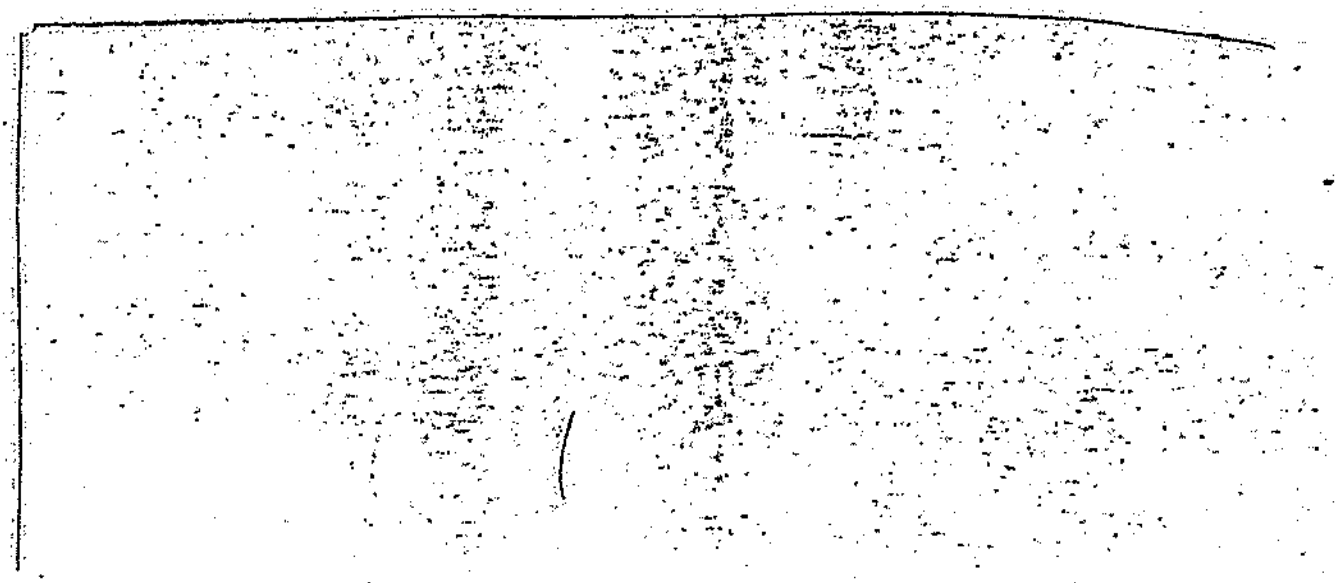
3. (U) PROGRAM MANAGEMENT DIRECTION

(U) The following actions are mandatory. AF/RDS and AF/XOS will be notified, in advance when possible, of any inability to comply. CINCAD should be included in the notification if conditions could adversely impact operational performance of the DSP system.

a. (U) Operations

(1) (U) SPACECOM will test system capabilities on a regular and recurring basis without perturbing the primary mission. The evaluated subsystems will include ground station hardware and software, the GCN, and the appropriate elements of the Command Center Processing and Display System and NORAD Computer System. Results of the system tests, and the evaluation criteria, will be provided to AF/RDS, AF/XOS, ADCOM/J-3, and SD/YG on a semi-annual basis.

(2) [redacted]



(6) (U) All ADP hardware located at operational sites will be modified to the latest vendor specification level whenever such modification does not degrade mission performance. For non-SPS hardware, AFLC is responsible for procurement configuration management, and any necessary follow-on support for installed modifications. For SPS hardware, SPACECOM will perform the AFLC functions. AF/RDS will be notified if major funding results from this direction.

(7) (U) AFSC will ensure that planning for payload processing for the Rotating Service Structure (RSS) is accomplished. RSS processing time is to be minimized in the Space Shuttle Factory-to-Offline Facility-to-Pad timelines. The offline facility to be used by DSP for mating with the IUS and checkout is the DoD Shuttle/Payload Integration Facility (SPIF). NASA standard and optional services for DSP launches, including DSP processing time in NASA facilities, are to be negotiated in the DSP Payload Integration Plan (PIP) and agreed to in the DoD/NASA Launch Services Agreement.

(8) (U) DSP satellites 5R and 6R are assigned to a Titan III (34D)/Inertial Upper Stage and satellite 12 is assigned to a Titan III (34D)/Transtage. P.E. 35119F, Space Boosters, will provide the hardware support funding in FY 82 and subsequent years to maintain launch readiness of these boosters.

(9) (U) Satellites 14-17 are assigned to the Space Shuttle/Inertial Upper Stage. P.E. 35171F, Space Launch Support Program will provide funding to reimburse NASA to support launch requirements. AFSC will evaluate the transition to the Centaur Upper Stage. This evalutation will include trade studies, costs and establishment of appropriate time phasing and will be accomplished within the current budget.

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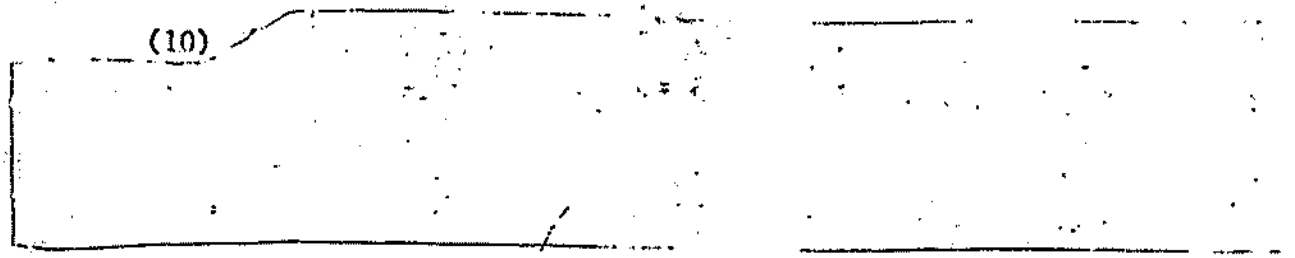

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b. (U) Flight Hardware

(1) (U) Launch Vehicle Integration. AFSC will develop the necessary designs, design modifications, integration tasks and retrofits to insure the following satellite/launch vehicle compatibility:

(a) (U) Satellites 5R and 6R will be compatible with the Titan III (34D)/Inertial Upper Stage (IUS).

(b) (U) Satellite 12 will be compatible with the Titan III (34D)/Transtage. Integration will be accomplished within FY 83/84 resources.

(c) (U) Satellites 14 and subsequent will be compatible with the Shuttle/IUS.

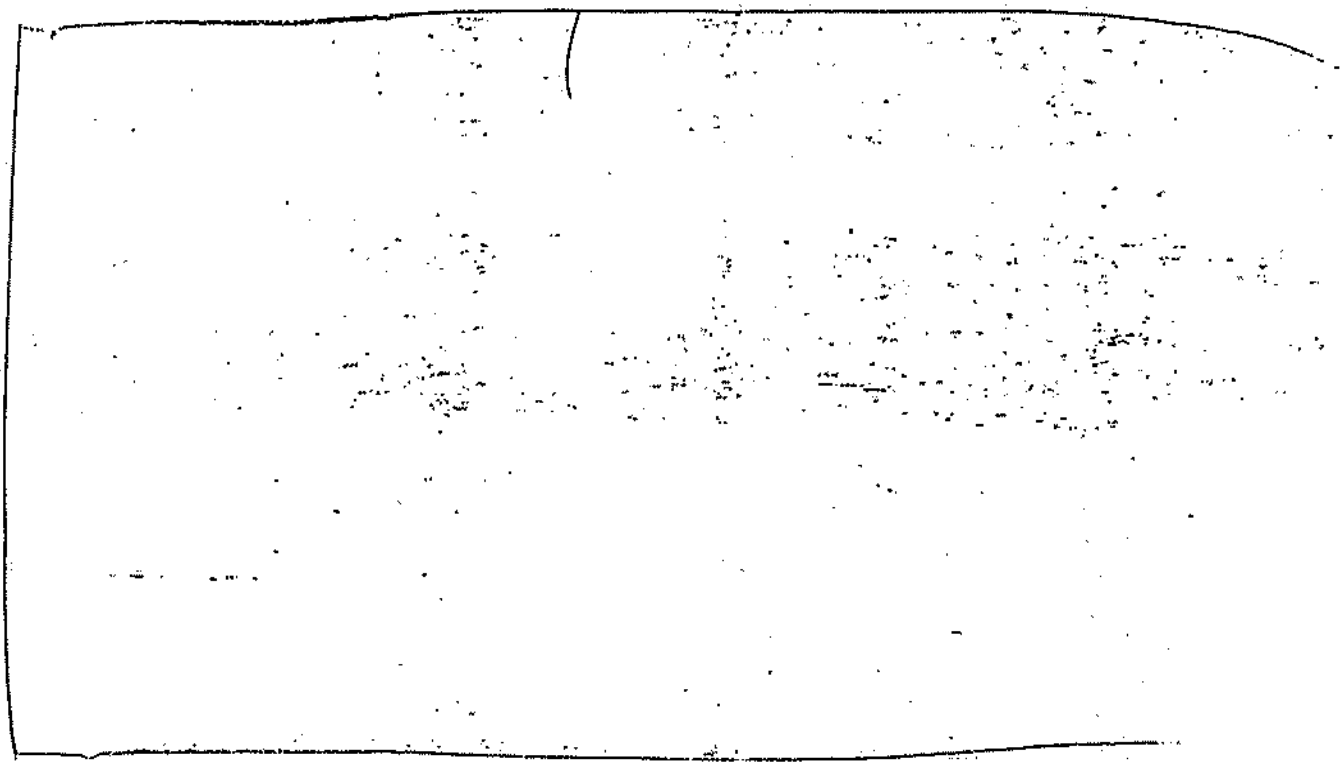
(2) (U) Satellite Tasks. AFSC will design, develop, produce, store, launch and retain engineering responsibility for DSP satellites in order to maintain the approved force structure. The following sub-paragraphs provide direction for capabilities that will be on satellites that have not been delivered.

(a)

(b)

in FY 84. Procure advanced RADEC I and advanced RADEC II sensors through the Department of Energy. The design features to be incorporated in Satellite 14 to provide the major survivability improvements called for in alternative 2 are listed below.

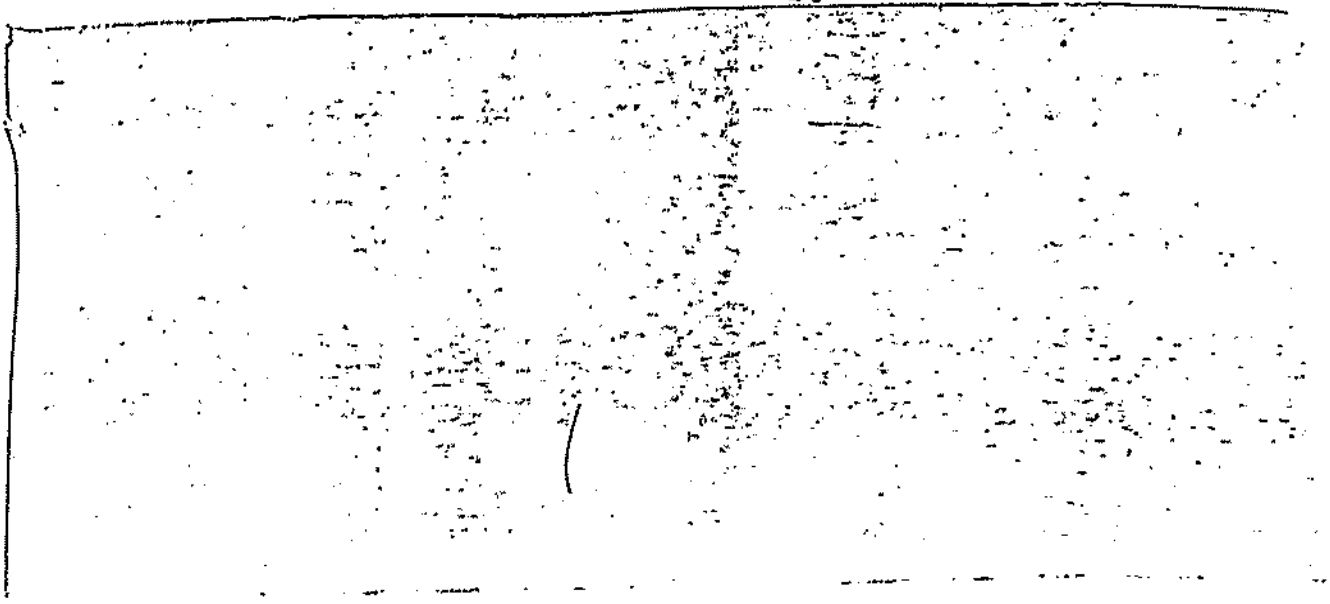
(3) (U) Survivability. A survivability program should be established in accordance with AFR 80-38. Satellites 5R and 6R and subsequent new satellites will incorporate nuclear hardness criteria requirements under conditions outlined by the Nuclear Criteria Group (NCG). Satellites 10-13 will meet the 1973 NCG criteria. A satellite survivability design verification program should be initiated to verify the operability and reliability of the designs developed in response to this paragraph and all other survivability design changes considered. The Program Management Plan should identify the anticipated survivability levels for each satellite. The following criteria apply to satellites 5R, 6R, 14 and subsequent.



(4) (U) ADCOM will prepare and maintain a Systems Operational Concept (SOC) and maintenance concept in accordance with AFR 57-1 for the operational use of the satellite 14 and subsequent survivability improvements. The SOC will be submitted to HQ USAF/XOO (by 1 Oct 83) for review and approval. ADCOM should include AF/XOOI in the "for comment" phase of the SOC to help expedite the formal review and approval cycle.

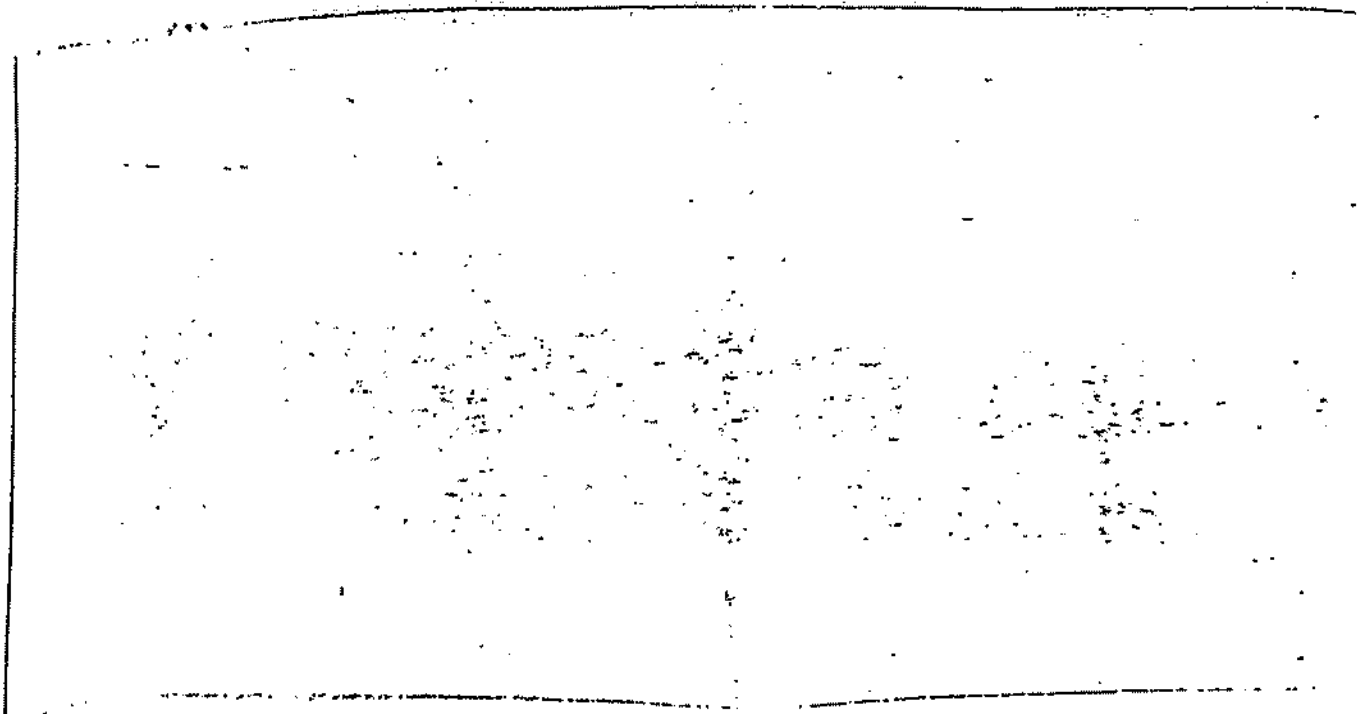
(5) (U) AFSC, through in-house review, should evaluate satellite subsystem procurement and production methods in an effort to reduce unit production costs and/or improve satellite on-orbit reliability. Where appropriate, cost effective recommendations will be made to AF/RDS.

(6) (U) Electronic Security Command (ESC) will assist AFSC in identifying the COMSEC requirements and equipment to enhance the electromagnetic survivability of the ground and satellite elements. ESC is responsible for providing the COMSEC equipment to support system requirements and COMSEC/TEMPEST engineering support required to integrate CI-1 and other COMSEC equipment into the DSP system.



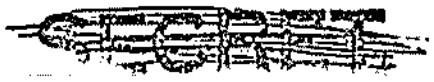
(c) (U) Communications security equipment requirements will be documented on AFCOMSEC Form 22 and forwarded through command channels to AFCSC/EPN, San Antonio, TX.

c. (U) Ground Facilities and Operations



(2) (U) AFSC, in coordination with SPACECOM, all users, AFCC, and AFLC will plan to procure an upgrade for GCN II. AFSC will determine if the Sure Comm Network Control (SCNC) being developed by ESD and procured under the Jam Resistant Secure Communications (JRSC) Program is a candidate for the GCN computer and the feasibility of starting this effort in FY 84. Consideration should be given to standardizing COMSEC equipment (e.g., TSEC/KG-82, TSEC/KG-84) and submitting requirements via AFCOMSEC Form 22 through command channels to AFCSC/EPN, San Antonio, TX.

(3) (U) AFSC will be responsible for electromagnetic pulse (EMP) shield inspection and testing associated with any modifications AFSC has been directed to make to the existing facilities, as well as correction of any



deficiencies resulting from those modifications. AFSC, assisted by SPACECOM, AFWL, AFCC and AFLC, will develop a hardness assurance and hardness maintenance program for the MGT and GCN equipment. Routine EMP hardness maintenance, inspection and testing of EMP shielding for the CGS, OGS and SPS will be the responsibility of SPACECOM, AFLC and AFWL.

(4) (U) AFSC and SPACECOM/AFCC will provide engineering/provisioning data to AFLC as modifications or mission changes are made affecting the DSP Ground Data System so that follow-on support can be provided in the most expeditious manner.

(5) (U) AFSC will modify the DSP Large Processing Station(LPS)/Simplified Processing Station hardware/software for support of the evolutionary sensor and an advanced RADEC 1. AFSC will modify the Operational Support Module (OSM) for a Mission A and/or B capability and to support the evolutionary sensor and advanced RADEC 1. AFSC, with SPACECOM, AFLC, AFCC, SIO, and ESC, will investigate the need for replacing the Satellite Readout Stations (SRS) at the LPSs. Funding requirements, including provision and spares, will be submitted during the normal POM budgeting process.

(6) (U) AFSC will replace the peripheral hardware and required supporting software at the CGS, OGS, MPF, IBM/Westlake and AESC/Azusa. SPACECOM, AFCC, AFLC and the System Integration Office (SIO) will support this effort to insure a timely installation and test schedule. AFSC, with SPACECOM, AFCC, SIO, ESC and AFLC, will assess impacts of the peripheral replacement on the ground stations in time to submit funding requirements in the normal POM budgeting process. This assessment will include, but not be limited to, potential impacts on facilities, power, cooling, security, software integration, system certification and the schedule. AFLC will procure the necessary provisioning documents and spare parts to support the new peripherals.

(7) (U) AFSC will procure the necessary modifications and/or new hardware/software to provide for adequate test and checkout equipment for new and modified satellites. Shuttle compatibility will be considered in providing such equipment.

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(b) (U) SPACECOM will maintain the SOC for the MGS and review and evaluate changes generated through the iterative process of operational concept development. A maintenance concept, including operational reliability and maintainability criteria IAW AFR 800-18, for the MGS will be included. AFSC will provide a MGS Hardness Maintenance/Hardness Surveillance Plan in accordance with AFR 80-38.

(c) (U) AFSC, with AFLC and the participating commands, will ensure that an appropriate integrated logistics support (ILS) program is established and funded to meet the objectives of AFR 800-8. Life cycle cost analysis will be performed in determining the preferred support approach. Reliability and maintainability goals will be established to support the intended operation.

(d) (U) AFSC will be the system integrator for the Mobile Ground System (MGS) design and procurement. As system integrator, AFSC will provide overall management for the MGS with a goal of turnover of an operational MGS and subsequent Program Management Responsibility Transfer (PMRT) of MGS hardware. PMRT of MGS software will occur after the PMD for PE 12431F ceases to direct AFSC to perform future MGS software modifications/upgrades for new capabilites. AFSC will provide procurement of those items directed and funded under PE 12431F; identification of system requirements on external systems; and management of design compatibility of systems procured by other organizations and directed under PE 12431F to ensure that operational requirements are met by all equipment elements associated with the total MGS operational system.

(e) [redacted]

(f) (U) SPACECOM, with AFSC, ESC and AF/IN support, will develop an MGS operations/security plan. This plan will address the details of day-to-day operational employment and security operations necessary to insure MGS survivability. AFSC support will be in the form of studies which will identify operations/security methods which counter the threat. The plan will be submitted in time to support MGS IOT&E and IOC.

(g) (U) SPACECOM with support from AFSC, will review their requirements for MGS support vehicles. SPACECOM will obtain those standard vehicles that can meet the requirements. SPACECOM and AFSC will determine the appropriate procurement agency for any "non-standard" vehicles that are required.

(h) (U) AFSC will upgrade the OSM to provide a MGS software maintenance capability (including satellite 14). SPACECOM will maintain the MGS operational software. AFSC will maintain the MGS development software, including its specification, in accordance with MGS CRISP.

(1) (U) SPACECOM will provide special logistics spare support requirement in accordance with AFM 67-1 for support of MCS trans-/post-attack operations to AFLC by 15 September 1983. AFLC will acquire these user defined spares.

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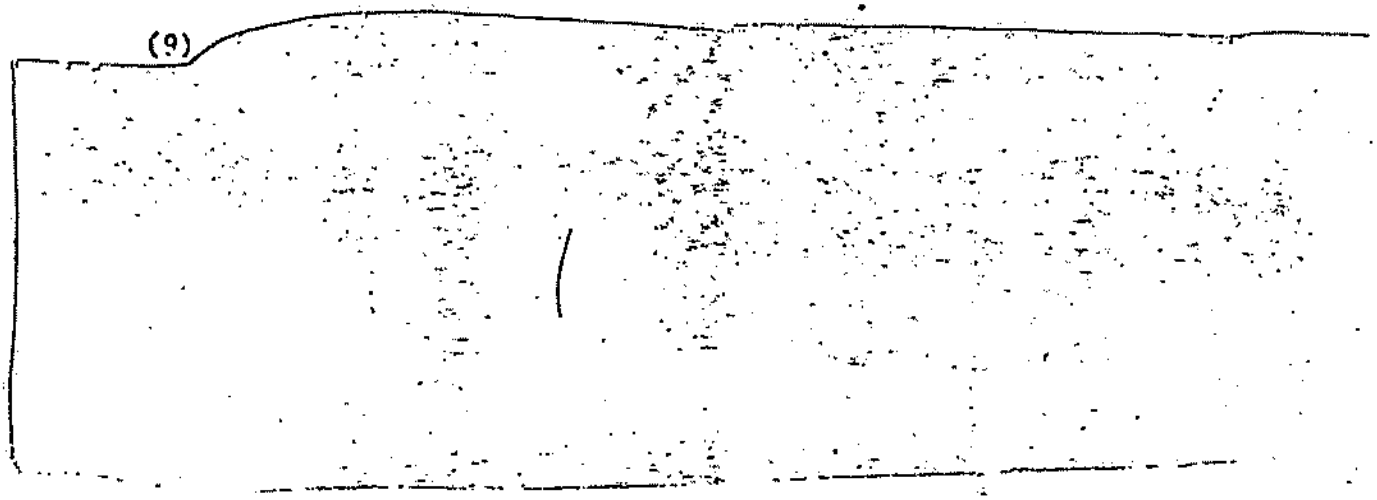

(10) (U) [illegible] for the concurrent operation and maintenance support of the IBM 360/75 and the Large Processing Station (LPS) Upgrade string in the MPF until the completion of the LPS Upgrade at all operational sites. The primary purpose of this dual operation is to insure operational support and availability. SPACECOM will provide the remainder of the funding for this temporary capability. At the direction of SPACECOM, all IBM 360's will be removed by AFSC.

(11) (U) AFSC will provide alternatives to the Mission Data Message Rebroadcast to the MDM Steering Group as soon as possible. Based on the results, SAC with AFSC and AFLC support, will plan for Airborne Command Post receipt of DSP mission data messages from MGTs. Primary functions as defined in the WWMCCS Airborne Resource Operations Order (JCS Ops Order 2-84) will be considered for all WWABNCP aircraft. MILSTAR compatibility will also be considered. The results of this review should be provided to HQ USAF/RDS/XOS/SIM, with information copy to HQ AFSC/SD and SD/YG by 1 September 1983. COMSEC equipment requirements will be documented via AFSATCOM Form 22 and submitted through command channels to AFCSC/EPN, San Antonio, TX.

(12) (U) AFSC will design, develop, test and install signal processing equipment required to support satellite 14-17 at the development facilities, SCF Remote Tracking Stations, CGS, OGS and MPF. The commanding computers and spacecraft simulator will be replaced. AFSC, with SPACECOM support, will assess replacement of the remainder of the signal processing equipment during the effort. Pending requirements will be submitted during the FY 86 POM. AFSC, with SPACECOM, AFCC, SIO, and AFLC, will assess impacts of these modifications on the ground systems in time to submit funding requirements in the normal POM budgeting process. This assessment will include, but not be limited to potential impacts on facilities, power, cooling, security (to include physical information and computer system hardware and software), software integration, system certification, user interfaces and the schedule. A two phase implementation will be investigated for the MGTs. The purpose of the first phase is to allow satellite 14-17 (including crosslink) primary mission data to be processed even if all the satellite 14-17 upgrades cannot be used. The second phase will complete the implementation, including a limited commanding capability.

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(14) (U) As DSP operational system manager, SPACECOM will provide management analysis support to insure minimum mission impacts resulting from the ground station development, modification and implementation tasks directed in this PMD.

(15)

d. (U) Software

(1) (U) The "Computer Resources Integrated Support Plan (CRISP) for the Defense Support Program", dated 31 July 1981, will be the governing document for all contemplated or directed Class 1 changes to turned-over DSP, LPS, MPF, SPS and GCN computer resources. The "Operational/Support Configuration Management Procedures (O/SCMP) for the Defense Support Program", dated 31 July 1981, formalizes the procedures that support the CRISP. AFSC will update the CRISP and O/SCMP as required to include all efforts directed in this PMD toward the LPS, MPF, SPS and GCN and will provide a compainion CRISP and O/SCMP for the MGS. These documents will be submitted to AF/RDS/SIPB. AFOTEC will be included because of their testing responsibilities defined in paragraph 4i of this PMD.

(2)

1 (U) For AFSC, software efforts will consider initiation/collection algorithm optimization, improvements in tactical parameter accuracy, detection of non-nominal trajectories, and realtime boresighting,

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[redacted]

3 (U) For AFSC, SPS/MGT software will be modified for SED BTR Mission A and ARI capabilities. Plan to add an SPS/MGT SED ATH capability coincident with the implementation of the satellite 14 second color capability.

4 (U) For AFSC, make necessary software changes (System 8) to accommodate the new peripherals.

5 (U) AFSC will integrate the System 7 software developed into the operational product baseline, along with SPACECOM developed software modifications.

6 (U) The above efforts, and any additional, must be documented by CRISP/SEP and be within approved program funding.

7 (U) AFSC will initiate the development of LPS system 9 software to support satellite 14 and subsequent.

(b) [redacted]

(c) [redacted]

(d) (U) AFSC will develop software for the upgrade replacement of GCN II, the evolutionary sensor, MGTs and the satellites 14-17 upgrades. This will be time-phased to complement the hardware acquisition. The MGT software will take full advantage of the SED capabilities and be updated to the latest message Interface Control Drawing.

(3) (U) SPACECOM will maintain the operational software for the CI-1 and the Simplified Processing Station (SPS) systems; AFSC will maintain the development software for the LPS, SPS and MGTs.

e. (U) Technical Assessments

(1) (U) AFSC and SPACECOM will continue to conduct assessments aimed at increasing system performance and reliability to meet approved objectives, and reduce life cycle cost.

(2) [redacted]

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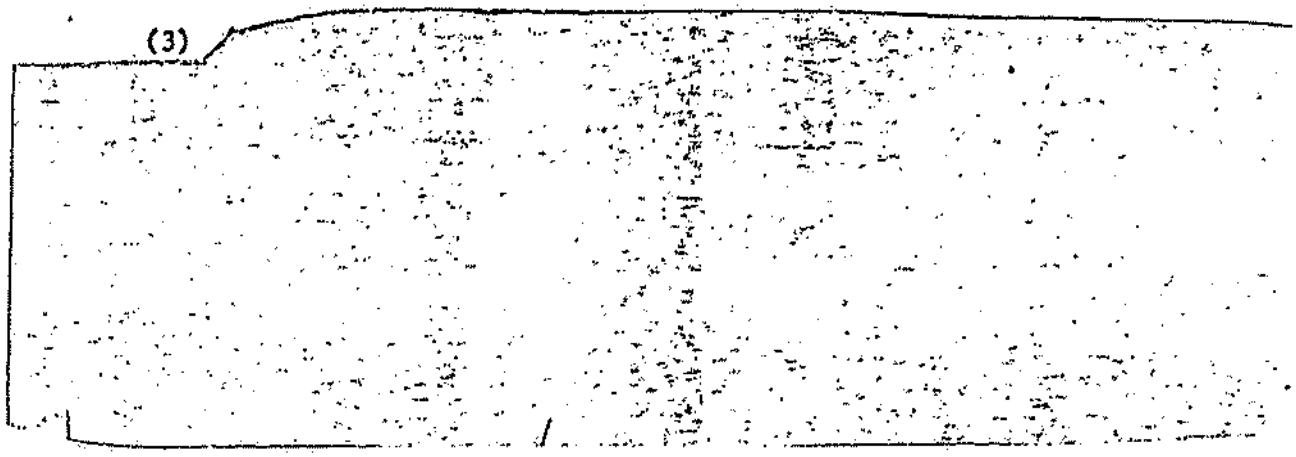

f. (U) Other Efforts

(1) (U) AFSC will update the Program Management Plan (PMP) by 15 December 1983 to reflect direction/guidance contained in this PMD.

(2) (U) An updated Ten-Year Computer Assets Utilization, Requirements and Disposition Plan will be developed by AFSC, assisted by SPACECOM, coordinated with [illegible], FTD, and AFCC where applicable, and submitted to AF/RDS by AFSC by 31 December 1983. The plan will address method of acquisition, time phased procurement cost (as appropriate), utilization (to include FTD requirements), and method of disposition for all current and planned data processing equipment supporting [illegible] of the DSP. The plan will reflect the current status of all DSP data processing assets, both operational and developmental, including SPS and MGT ADPE assets.

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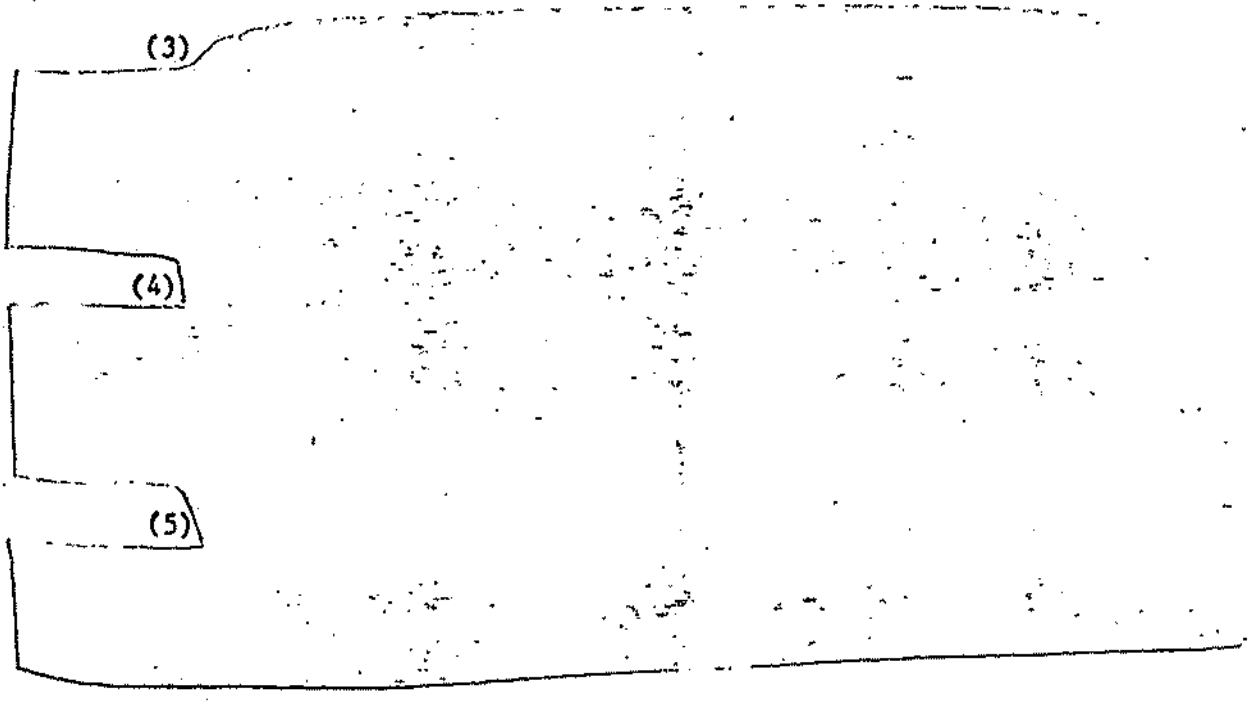

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(6) (U) AFSC will maintain a current test and evaluation master plan (TEMP) with OT&E inputs provided by AFOTEC and SPACECOM, and forward as required to HQ USAF/RDS/XOO for review. This TEMP should include OT&E and IOT&E testing for those DSP upgrades where it has been determined test and evaluation is warranted. As new upgrades are defined, the TEMP will be updated and forwarded to HQ USAF/RDS/XOO for review.

(7) (U) AFSC will submit, with each budget input (POM and BES) for DSP, an exhibit which describes the tasks required for each launch requiring funding in the POM or BES years, the funds required for each task, and the source of these funds (by Program Element).

(8) (U) AFSC will ensure that updated STS Forms 100 are provided to NASA within 30 days of revised program direction or other events that cause programmatic changes affecting STS Forms 100 data. Information copies will be provided to AF/RDSD/RDSL.

(9)

(10) (U) SPACECOM will provide ground station acquisition support to AFSC. The goal of this effort will be to insure that all the efforts directed in this PMD are designed, installed, integrated, tested and transitioned into the operational inventory with minimum impacts to both the implementing contractor and the operational mission.

4. (U) PROGRAM MANAGEMENT GUIDANCE:

a. (U) The DoD Space Shuttle Transition Plan, Annex D1, as modified by DoD Space Mission Model, FY 83 President's Budget, Jan 1982 and by paragraph 3b(1) of this PMD, is the approved transition plan for the Defense Support Program. Proposed revisions to the approved plan will identify the impact of the change on all other annexes.

b. (S)

c. (U) Schedules

Responsible Agency	Date Required	Activity	Applicable Paragraph
SPACECOM	Semi-Annual	System Test	3a(1)
ADC (Cont'd)	As required	ADCR 55-55	3a(2)

Responsible Agency	Date Required	Activity	Applicable Paragraph
AFSC	As required	LOP Deviation	3a(4)
SPACECOM	Semi-Annual	DSP Performance	3a(9)
ADC	1 Dec 83	SOC for Satellite 14-17	3b(4)
SPACECOM	1 Dec 83	AR I/AR II Requirements	3b(7)(b)
SAC	1 Nov 83	MDM/ABNCP/DSP Interface	3c(11)
SPACECOM	IOT&E/IOC	MGS Security Plan	3c(8)(f)
SPACECOM	1 Nov 83	MGS Spares Rqmts	3c(8)(i)
AFSC	As required	CRISP and O/SCMP	3d(1)
SPACECOM	1 Nov 83	DSP SEP	3d(2)
AFSC	15 Dec 83	PMP	3f(1)
AFSC	31 Dec 83	10yr Computer Plan	3f(2)
SPACECOM	Annual	Focal Plane Temp	3f(5)
AFSC	As required	TEMP	3f(6)
AFSC	POM/BES	Launch Funding	3f(7)
AFSC	As required	STS Form 100	3f(8)

d. (U) Related Items

(1) (U) Determination and Findings currently in effect are: D&F PPM-78-DF-11, D&F 78-11 C-63, AP PMD-79-0002, Jan PMD-80-DF-8, D&F 80-11-54, D&F 81-11C-5.

(2) (U) Telecommunications funding in support of DSP is managed under PE 12447F with AF/XOSC the designated OPR. All telecommunications funding requirements should be submitted to AF/XOS, with an information copy to AF/RDS and AF/XOK.

e. (U) Procurement

(1) (U) Competitive procurement and design-to-cost philosophies should be employed to the maximum extent possible consistent with operational requirements and management considerations.

(2) (U) Life cycle cost (LCC) analyses should be employed in cost effectiveness studies that influence design and procurement decisions, and the evaluation of engineering change proposals. DoD LCC Guide LCC03, AFR 800-3, and AFR 800-11 apply.

f. (U) Logistics: Integrated logistics support (ILS) principles will apply using guidance contained in AFRs 800-3, 800-8, and 800-12.

g. (U) Security: The Security Classification Guide (SCG), Defense Support Program, dated 15 June 82, and subsequently approved amendments, provide security guidance for the DSP. SPACECOM is responsible for the SCG. Updates must be fully coordinated and submitted to HO USAF/RDSD/XOSO for approval by SAF/AL. For current direction concerning foreign disclosure, reference should be made to the appropriate delegation of Disclosure letters, as redelegated by major commands. Essential DSP facilities, including the SPS, are designated Security Priority A and will be afforded security in accordance with AFR 207-1

and AFR 207-21. Requirements for Base Installation Security Systems (BISS) will be fully documented and submitted to AFOSP for consideration, along with other priority requirements. Supporting COMSEC equipment requirements for BISS will be documented via AFCOMSEC Form 22 and submitted to AFCSC/EPN, San Antonio, TX.

h. (U) System Safety Engineering. All directives addressing a system acq[illegible] should include system safety engineering requirements in accordance with AFR

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i. (U) Test and Evaluation (T&E). T&E will be conducted IAW the TEMP. Development and operational tests should be combined when clearly identified and significant cost/time benefits can be realized. Combined DT&E/OT&E will be encouraged, provided test conditions, test instrumentation, and test data required by both the developing and OT&E agency can be obtained. Also, the test programs directed below should be combined where schedule and hardware/software allow. The OT&E agencies for each segment of the DSP will be as follows:

(1) (U) Sensor Evolutionary Development (SED) Satellites, including the ground control segment (hardware and software). SPACECOM will manage the OT&E and AFOTEC will monitor. No dedicated satellite OT&E test events should occur. SPACECOM should work from the same data base as Space Division in order to independently evaluate the satellite and assess the adequacy of testing. In case satellite OT&E events are deemed desirable, the paragraph (7) requirement applies. AESC on-orbit DT&E, including the ground system hardware/software testing, will precede OT&E and should be combined where possible.

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(2) (U) Large Processing Station Upgrade (LPSU), including the computer replacement, SED software and Peripheral Upgrade Programs (PUP). SPACECOM will manage the OT&E and AFOTEC will monitor.

(3) (U) Simplified Processing Station (SPS)/Operational Support Module (OSM), including the status upgrade and the SED hardware and software upgrades. SPACECOM will plan for and conduct the OT&E.

(4) (U) Multi-Purpose Facility Upgrade (MPFU), including SED hardware and software upgrades. SPACECOM will plan for and conduct OT&E.

(5) (U) Ground Communications Network Upgrade (GCN-II Upgrade). SPACECOM will manage the OT&E and AFOTEC will monitor.

(6) (U) Mobile Ground System (MGS) (MGT and Communications Capability). AFOTEC will manage the OT&E with support from the implementing and participating commands.

(7) (U) DSP survivable satellites 14-17, including the ground control segments. AFOTEC will manage the OT&E with support from the implementing and participating commands. No dedicated satellite OT&E test events should occur. AFOTEC should work from the same data base as Space Division in order to independently evaluate the satellite and assess the adequacy of testing. In case dedicated satellite OT&E test events are deemed desirable, a recommendation will be provided to HQ USAF/RDS/XOS at least 90 days prior to the test. This recommendation should include at least the following: rationale, including

h. System Safety Engineering: All directives addressing a system should include system Safety Engineering requirements in accordance with AFR 800-16.

i. Test and Evaluation (T&E):
Development and operational tests should be combined when clearly identified and significant cost/time benefits can be realized. Combined DT&E/OT&E will be encouraged, provided test conditions, test instrumentation, and test data required by both the developing and OT&E agency can be obtained. Also, the test programs directed below should be combined where schedule and hardware/software allow. The OT&E agencies for each segment of the DSP will be as follows:

(1) Sensor Evolutionary Developement (SED) Satellites, including the ground control segment (hardware and software) -- SPACECOM will manage the OT&E and AFOTEC will monitor. No dedicated satellite OT&E test events should occur. SPACECOM should work from the same data base as Space Division in order to independently evaluate the satellite and assess the adequacy of testing. In case satellite OT&E events are deemed desirable, the paragraph (7) requirement applies. AFSC on-orbit DT&E, including the ground system hardware/software testing, will precede OT&E and should be combined where possible.

(2) Large Processing Station Upgrade (LPSU), including the computer replacement, SED software, and Peripheral Upgrade Programs (PUP)--SPACECOM will manage the OT&E and AFOTEC will monitor.

(3) Simplified Processing Station (SPS)/Operational Support Module (OSM), including the status upgrade and the SED hardware and software upgrades. SPACECOM will plan for and conduct the OT&E.

(4) Multi-Purpose Facility Upgrade (MPFU), including SED hardware and software upgrades - SPACECOM will plan for and conduct OT&E.

(5) Ground Communications Network Upgrade (GCN-II Upgrade) - SPACECOM will manage the OT&E and AFOTEC will monitor.

(6) Mobile Ground System (MGS) (MGT and Communications Capability) - AFOTEC will manage the OT&E with support from the implementing and participating commands.

(7) DSP survivable satellites 14-17, including the ground control segments - AFOTEC will manage the OT&E with support from the implementing and participating commands. No dedicated satellite OT&E test events should occur. AFOTEC should work from the same data base as Space Division in order to independently evaluate the satellite and assess the adequacy of testing. In case dedicated satellite OT&E test events are deemed desirable, a recommendation will be provided to HQ USAF/RDS/XOS at least 90 days prior to the test. This recommendation should include at least the following: rationale, including

reason data was not available during DT&E; risk analysis; cost and schedule impact; and potential effect on sensor/satellite incentives.

j. (U) Turnover and Program Management Responsibility Transfer. AFSC and AFLC will develop a Program Management Responsibility Transfer (PMRT) agreement for all new systems and subsystems introduced into the DSP Program, using guidelines contained in AFR 800-14. SPACECOM will command support, including Program Management Responsibility, the SPS. AF/RDS will be advised of PMRT dates so appropriate PMD direction can be issued. PMRT documents will be withheld referenced in the PMP. Turnover will be in accordance with AFR 800-19.

k. (U) Manpower. The latest approved manpower levels are contained in the FY 84-88 PB. These levels reflect the program three satellite force structure and two large ground stations - the SPS, the MPE, the CCN and six Mobile Ground Terminals starting in FY 88. PE 33605F contains manpower for six Mobile Communication Terminals. withheld

l. (U) Data Automation. HQ USAF (AF/SC) will participate in the DSP program as the Office of Collateral Responsibility (OCR) for Automatic Data Processing (ADP) policy guidance. ADP resources acquired in compliance with this PMD will be acquired/managed in accordance with AFR 800-14 unless: (a) the ADPE is acquired by the Air Force as a separate entity or, (b) the ADPE is procured as GFE to the contractor. In these two instances, AFR 300 series will govern the ADP resource acquisition. The government rights to software will be determined in accordance with DAR 9-600. The governing directives and procedures for the management of the ADP subsystem after DT&E and turnover to current operations should be decided by the Computer Resources Working Group (CRWG) and documented in the Computer Resources Integrated Support Plan (CRISP) withheld In accordance with AFR 800-14, paragraph 2-4 and 8-8.s, ADP resources will be procured to meet the national technical criteria on compromising emanations.

m. (U) Personnel Training.

(1) (U) AFSC will maintain a Personnel Subsystem (PS) function to act as a focal point for the timely identification of required training actions related to new acquisitions and discrepancy resolutions. The using commands will identify their Trained Personnel Requirements (TPR) directly to ATC. ATC will identify training equipment and technical data requirements to the PS manager for procurement, as appropriate, and will establish training programs to satisfy all validated training requirements. Support required by ATC in the contractor's facilities, other than Type I contract training, will be provided by AFSC. A time phased plan for providing required training will be incorporated into or attached as an annex to, the Program Management Plan.

(2) (U) ATC training conducted in the MPE will use available equipment to the maximum extent, consistent with valid operation/maintenance requirements. When hardware is not available for training use, ATC will substitute academic instruction. The operating/using commands are responsible for equipment oriented follow-on training through formal on-the-job (OJT) training programs. OJT problems generated by the lack of access to one-of-a-kind operational equipment will be referred to the PS manager by the using commands for resolution. Training developed for DSP will reflect the requirements contained in AFR 50-8 and AFM 50-2.

n. (U) Public Release. Information on this program for public release may be cleared for release only after it is reviewed for security and consistency

reason data was not available during DT&E; risk analysis; cost and schedule impact; and potential effect on sensor/satellite incentives.

j. Turnover and Program Management Responsibility Transfer: AFSC and AFLC will develop a Program Management Responsibility Transfer (PMRT) agreement for all new systems and subsystems introduced into the DSP Program, using guidelines contained in AFR 800-14. SPACECOM will command-support, including Program Management Responsibility, the SPS. AF/RDS will be advised of PMRT dates so appropriate PMD direction can be issued.

Turnover will be in accordance with AFR 800-19.

k. Manpower: The latest approved manpower levels are contained in the FY 84-88 PB. These levels reflect the program three-satellite force structure and two large ground stations, the SPS, the MPF, the GCN and six Mobile Ground Terminals starting in FY 83.

l. Data Automation: HQ USAF (AF/SIMC) will participate in the DSP program as the Office of Collateral Responsibility (OCR) for Automatic Data Processing (ADP) policy guidance. ADP resources acquired in compliance with this PMD will be acquired/managed in accordance with AFR 800-14 unless: (a) the ADPE is acquired by the Air Force as a separate entity or, (b) the ADPE is procured as GFE to the contractor. In these two instances, AFR 300 series will govern the ADP resource acquisition. The government rights to software will be determined in accordance with DAR 9-600. The governing directives and procedures for the management of the ADP subsystem after OT&E and turnover to current operations, should be decided by the Computer Resources Working Group (CRWG)
in accordance with AFR 800-14, paragraph 2-4 and 3-8. ADP resources will be procured to meet the national technical criteria on compromising emanations.

m. Personnel Training:

(1) AFSC will maintain a Personnel Subsystem (PS) function to act as a focal point for the timely identification of required training actions related to new acquisitions and discrepancy resolutions. The using commands will identify their Trained Personnel Requirements (TPR) directly to ATC. ATC will identify training equipment and technical data requirements to the PS manager for procurement, as appropriate, and will establish training programs to satisfy all validated training requirements. Support required by ATC in the contractor's facilities, other than Type I contract training, will be provided by AFSC. A time-phased plan for providing required training will be incorporated into, or attached as an annex to, the Program Management Plan.

(2) ATC training conducted in the MPF will use available equipment to the maximum extent, consistent with valid operation/maintenance requirements. When hardware is not available for training use, ATC will substitute academic instruction. The operating/using commands are responsible for equipment oriented follow-on training through formal on-the-job (OJT) training programs. OJT problems generated by the lack of access to one-of-a-kind operational equipment will be referred to the PS manager by the using commands for resolution. Training developed for DSP will reflect the requirements contained in AFR 50-8 and AFM 50-2.

n. Public Release: Information on this program for public release may be cleared for release only after it is reviewed for security and consistency

[redacted]

p. [redacted]

q. (U) Survivability: The DSP survivability program will be governed by AFR 80-38. Under the provisions of this regulation the Nuclear Critera Group will establish nuclear critera for the DSP and AF/RDQ is responsible for managing the Air Force survivability Program.

5. (U) PROGRAM RESOURCES

a. (U) Financial: The Budget Year and future portions of the funding profiles shown below are for planning purposes only. This document does not constitute authority to commit, to obligate, or to expend funds, except as authorized in the appropriate Procurement Authorization (PA) or Budget Authorization (BA).

(1) (U) Current year (and prior years) Program ($in M): The funds shown below reflect the amounts appropriated by Congress and any approved budget amendments/supplements or reprogramming actions:

Appropriation	Prior Years	Current Year FY 83
3600	864.5	121.6
3020	1,217.1	396.9
3080	423.5	87.8
Initial Spares (Non-Add)	(16.0)	(0.6)
3300	17.3	1.9
3400	248.4	61.3
SAC (Non-Add)		(24.7)

with Air Force, Department of Defense and Government policies and programs in accordance with AFR 190-17. Contractors must submit proposed releases to the Air Force activity specified in Item 12 of the DD Form 254, "Contract Security Classification Specification," or the major command concerned.

o. Upper Stage Selection Criteria: The Inertial Upper Stage will be used to insert DoD spacecraft into high energy orbits which cannot be reached by the Space Shuttle. Integrated satellite/propulsion stages, or stages other than the standard IUS family, will be used if life cycle cost benefits can be realized for the entire DoD budget. USAF funds will not be spent to develop propulsion stages which would be in direct competition with commercially developed spinning upper stages. Payload programs which desire to use stages other than the standard IUS family will present an alternative approach, which satisfies these criteria, to AF/RDS for evaluation and decision.

Appropriation	Prior Years	Current Year FY 83
AFSC (Non-Add)		(34.8)
3500	75.4	17.6
TOTAL *	2,846.2	687.1

(2) (U) Approved Program (S in M): The OSD approved program based on the President's FYDP is:

Appropriation	FY 84	FY 85	FY 86	FY 87	FY 88
3600	48.7	53.9	36.0	42.0	44.6
3020	356.9	35.8	223.1	374.8	389.7
3080	28.9	59.7	84.6	53.4	31.2
Initial Spares (Non-Add)	(0.6)	(2.0)	(2.1)	(2.1)	(0.6)
3300	0.0	0.0	0.0	0.0	0.0
3400	74.9	77.8	80.0	85.8	68.9
SPACECOM (Non-Add)	(33.3)	(32.9)	(34.2)	(35.6)	(36.9)
AFSC (Non-Add)	(40.3)	(43.7)	(44.5)	(48.8)	(30.5)
3500	16.8	19.4	20.2	20.0	20.0
TOTAL*	526.2	246.8	443.9	576.0	554.3

(3) (U) Air Force Current Position (S in M): The current Air Force funding position based on the POM is shown below. It is subject to OSD approval, is not program direction, and should only be considered the program's tentative financial plan.

Appropriation	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
3600	48.7	65.2	50.7	41.9	44.6	46.7
3020	356.9	35.9	223.6	375.6	390.4	413.2
3080	28.9	70.9	103.6	67.4	38.6	37.6
Initial Spares (Non-Add)	(0.6)	(12.0)	(14.8)	(11.1)	(5.3)	(5.7)
3300	0.0	6.0	0.0	0.0	0.0	0.0
3400	74.9	77.1	95.9	107.6	101.6	93.1
SPACECOM (Non-Add)	(33.4)	(38.9)	(42.3)	(47.4)	(53.0)	(59.3)
AFSC (Non-Add)	(40.3)	(36.8)	(52.1)	(58.7)	(47.0)	(32.0)
3500	16.5	19.7	20.5	20.3	20.2	20.2
TOTAL*	526.2	274.8	494.3	612.8	595.4	610.8

* Total may not add exactly due to round-off.

b. (U) Manpower: This PMD neither authorizes nor directs additional manpower. Should additional manpower be required, requests should be made IAW AFR 26-1, through manpower channels. The current Air Force approved manpower for PE 124311F is listed below. This manpower supports the DSP operational missions. In addition, manpower to support communications of DSP mission data is contained in PE 12447F, DSP Communications and PE 33605F, Defense Satellite Communications System. AFSC Program Office manpower is contained in PE 65806F.

	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
Officers	154	194	236	240	233	233	233
Airmen	584	702	738	725	723	723	723
Civilian	33	34	35	49	49	49	49

6. (U) PROGRAM BASELINE: The attached program baseline is approved and constitutes program direction. AF/RDS/XOS will be notified immediately of any inability to execute the program.

FOR THE CHIEF OF STAFF

JOE P. MORGAN, Major General, USAF
Director of Space Systems and Command, Control, Communications
DCS/Research, Development and Acquisition

2 Attachments
1. PMD Distribution List (U)
2. Program Baseline (S)

JOHN H. STORRIE, Maj Gen, USAF
Director of Space
DCS/Plans and Operations

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